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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/769,483

01/30/2004

Robert E. Clark

Duby/Clark-CIP

8748

22536

7590

07/06/2006

KNECHTEL DEMEUR & SAMLAN

ATTN: ALAN B. SAMLAN

222 S. RIVERSIDE, SUITE 1410

CHICAGO, IL 60606

EXAMINER

BIANCO, PATRICIA

ART UNIT

PAPER NUMBER

3761

DATE MAILED: 07/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/769,483

Applicant(s)

CLARK, ROBERT E.

Examiner

Patricia M. Bianco

Art Unit

3761

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 20-22 is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-17 and 19 is/are rejected.
- 7) ☒ Claim(s) 1, 9-11 and 13-19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Specification*

Applicant has indicated co-pending applications in the first paragraph of the specification. The first page of the specification should be updated to clarify the status of all related applications noted in the first paragraph of the specification. The status of nonprovisional parent application(s) (whether patented or abandoned) should also be included. If a parent application has become a patent, the expression "now Patent No. \_\_\_\_\_" should follow the filing date of the parent application. If a parent application has become abandoned, the expression "now abandoned" should follow the filing date of the parent application.

The disclosure is objected to because of the following informalities: It is the Examiner's position that Applicant has evoked sixth paragraph, means-plus-function language to define Applicant's invention.

Applicant uses the following means-plus-function language: "means for drawing and transporting fluid through cuvette;" "means for receiving the fluid transported and irradiated through the cuvette;" "means for enclosing the cuvette and irradiation station" when in use; "means for energizing the fluid irradiation apparatus"; "means for receiving the fluid transported through the cuvette;" "means for transporting the fluid through the cuvette" into the means for receiving fluid; "means for returning the fluid back through the cuvette" from the means for receiving fluid; "means for drawing and transporting fluid through cuvette;"

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“means for enclosing the cuvette and irradiation station” when in use; “means for controlling the operation of the fluid irradiation apparatus.”

Therefore the Examiner requires the Applicant to amend the specification pursuant to 37 CFR 1.75(d) and MPEP 608.01(o) to **explicitly state**, with reference to the terms and phrases of the claim element, what structures, materials, and acts perform the function(s) recited in the claim element(s).

Please note that the MPEP clearly states, “Even if the disclosure implicitly sets forth the structure, materials, or acts corresponding to the means-(or step-) plus-function claim element in compliance with 35 U.S.C. 112, first and second paragraphs, the PTO may still require the applicant to amend the specification pursuant to 37 CFR 1.75(d) and MPEP 608.01(o)...”. (Also see **MPEP 2181** (Rev. 1, Feb.2000)) *Wolfensperger*, 302 F.2d at 955, 133 USPQ at 542.

Appropriate correction is required.

### ***Claim Objections***

Claims 1, 9-11, & 13-19 are objected to because of the following informalities: It is the Examiner’s position that Applicant has evoked sixth paragraph, means-plus-function language to define Applicant’s invention. Therefore, the Examiner has objected to the claims for the reasons set forth above in the objection to the specification.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3-5, 8, 10-17, & 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Einstein (6,951,548). Einstein discloses a blood irradiating apparatus and method for irradiating blood. The apparatus includes a housing having a cover, an interior side defined in the housing, an irradiation station, and a plurality of UV light bulbs (i.e. at least two UV light sources) disposed adjacent to the plurality of cuvettes. At least one of the bulbs is shown to be in the cover portion of the apparatus. The cuvettes may be made of a strong, translucent material such as glass or high-density plastic. The apparatus may include a blood holding tank for holding untreated blood and one for treated blood and a storage tank for holding treated blood (i.e. means for receiving fluid). The blood is directed to and from the apparatus using tubing structures. The apparatus may include switches for controlling the activation of or the intensity of the individual UV sources. Einstein teaches that the UV may be of a variety of wavelengths or bandwidths. The blood is moved using a conventional pump. See figures 9-10 and col. 4, lines 24 to col. 5, lines 4-38.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 6, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Einstein (548), as applied to claim 1 above, in view of Schleicher (6,113,566). Einstein substantially discloses the invention as claimed, and does teaches that the UV may be chosen to be of a variety of wavelengths or band widths; however, with respect to claims 6 and 7, Einstein does not specifically teach that the UV wavelength be UVA, UVB, or UVC and calibrated to be between 40 and 400 nanometers. Also, with respect to claim 2, while Einstein does teach that the cuvette can be made of a strong material, such as glass, it is not taught that the cuvette is made of quartz crystal. Schleicher discloses a UV blood irradiation apparatus for irradiating blood to treat viral and/or bacterial infections comprising a housing having an irradiation station, a cuvette, a UV source, a peristaltic pump for moving fluid through the apparatus into and out of a cuvette, and a cover that encloses the cuvette and irradiating station when in use. Tubing transports and receives the fluid to and from the irradiation station and cuvette. Schleicher teaches that the UV source may be UVA, UVB, or UVC and may have a range of 2,000 Angstroms to 12,000

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Angstroms (200-1,200 nanometers). At the time of the invention, it would have been obvious to one having ordinary skill in the art to have modified the apparatus and method of Einstein to include UV sources to be any or more than one of UVA, UVB, or UVC as taught by Schleicher as a substitution of the generic UV source in Einstein's apparatus, since they are well known UV wavelengths for use in blood treatment. With respect to the specific range of 40-400 nanometers, choosing such a range for the wavelength would have been obvious, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

With respect to claim 2, it would have been obvious to have made the cuvette of Einstein's apparatus out of quartz crystal (claim 2) since at the time of the invention, it would have been obvious to one having ordinary skill in the art to choose the material of quartz crystal for the cuvette, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

### ***Allowable Subject Matter***

Claims 20-22 are allowed. The subject matter of the independent claims could either not be found or was not suggested in the prior art of record. The subject matter not found was step of reversing the directional flow of the fluid to pass back through the same cuvette and irradiating the first irradiated fluid within

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the cuvette to produce a second irradiated fluid in combination with the other elements (or steps) in the claims.

Claims 9 & 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

With respect to claim 9, the subject matter not found was the inclusion of an ivac bottle for drawing and transporting fluid through the cuvette in combination with the other elements (or steps) in the claims.

With respect to claim 22, the subject matter not found was the inclusion of a lens covering the second UV light source in combination with the other elements (or steps) in the claims.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patricia M. Bianco whose telephone number is (571) 272-4940. The examiner can normally be reached on Monday to Friday 9:00-6:30, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tatyana Zalukaeva can be reached on (571) 272-1115. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

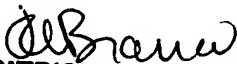


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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

June 23<sup>rd</sup>, 2006

Patricia M Bianco  
Primary Examiner  
Art Unit 3761

  
**PATRICIA BIANCO**  
**PRIMARY EXAMINER**  
6/23/06